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THE ROENTGENOLOGIST AS A CONSULTANT IN ACUTE ABDOMINAL CONDITIONS*

O. O. Feaster, M.D.,
St. Petersburg.

Roentgenology is one of the youngest of the medical specialties. Less than two score years have passed since Roentgen discovered the "ray." Years of patient study and careful observation by numerous workers have been necessary for the establishment of a foundation upon which to build. Improvements in equipment and development of technic were essential to advanced accomplishments. The x-ray machine during these formative periods was just another piece of equipment in the office of the general practitioner, the surgeon or the internist—its use limited to the examination of a bone, a lung or, on occasion, a stomach. Gradually there developed among these practitioners individuals who demonstrated a desire for and a special proficiency in this type of diagnostic practice. The x-ray specialist was born—a man of special training in the interpretation of screen and film shadows based upon a knowledge of physiology and pathology obtained from experience in the practice of general medicine, a knowledge kept alive and fresh from constant contact with almost every field of medical practice in his daily work, so wide are the ramifications and usages of x-ray practice today.

The roentgenologist, to give that help of which he is capable, that help to which the attending physician and the patient are rightfully entitled, must be looked upon as a medical consultant. If he confines his diagnostic opinions to reading from films or the screen, without taking into consideration the history, physical signs and symptoms of the disease process under study, and interpreting his findings in the light of these, he is failing to give the help of which he is capable. If the referring physician asks only an opinion based on the reading of a film he is restricting the usefulness of the roentgenologist; he is refusing, or failing to take advantage of, the aid which a medical consultant may give to him and, through him, to the patient.

Not infrequently one is requested to "just fluoroscope the lungs," "only make one film of the stomach," "do a single film of the ankle" and other equally absurd and ridiculous restrictions. Quite analogous would be calling these men into consultation in a heart case and demanding that they make a diagnosis of the lesion but limit their examination entirely to palpation; a lung diagnosis, by percussion only; or of an infectious disease from an inspection of the temperature chart alone. To accede to such restrictive requests is to oftentimes render one unable to help and the self-respecting roentgenologist will naturally not permit himself to be so handicapped. At times the referred patient, because of gastric pathology, will be found, instead, to have gall-bladder disease, chronic appendicitis, pulmonary tuberculosis or a cardiac lesion to account for his symptoms.

We are convinced that the doctor who interprets his own films made by some technician or who uses an office fluoroscope places himself at a definite disadvantage and, except possibly in fracture work, would be a better diagnostician without this help because of the false sense of security which these means give to him. Many are the early pulmonary lesions that are missed in a fluoroscopic examination either because they are unable to be seen except on stereoscopic films of excellent quality or because the doctor did not allow sufficient time in the darkened room for proper fluoroscopic vision. How easy it is for the urologist looking for a stone in his kidney film to fail to observe an old unrecognized spine fracture, malignant metastasis, arthritis, or slight erosion from an abdominal aneurism that may be causing the pain for which the patient consulted him. And how vastly more untenable is the position of the doctor who seeks and accepts the opinion of an x-ray technician—certainly this same physician would not be willing to accept as a heart consultant a nurse because she was trained in taking blood pressure readings.

Please understand that it is not intended to convey the idea that all x-ray knowledge is con-

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fined to roentgenologist or that roentgenologists are infallible. We have seen good x-ray work in limited fields by other doctors and our own errors and failures too often for that; but it is intended to impress the fact that the roentgenologist can be of most value when his help is sought as a medical consultant and not as an x-ray technician.

Certainly no phase of the practice of medicine entails a greater responsibility than the proper handling of acute conditions within the abdomen. Often the life of the individual depends upon a proper diagnosis or at least upon the decision that a laparotomy is necessary even if a positive diagnosis cannot be made. Not infrequently the percentage of lives saved is inversely proportional to the hours of delay. Any procedure which helps to make a diagnosis more certain and helps to make it earlier should not only be welcomed by the attending physician and the surgeon who are shouldering the responsibility but may also be the means of increasing the chances for recovery of the patient by more prompt operative interference.

Material assistance in acute abdominal conditions may often be obtained from the roentgenologist. In fact, in some instances his work will determine definitely a diagnosis that will make the decision to operate immediately, or not at all, an easy one. X-ray procedures in such cases with proper equipment usually entail no harmful results to the patient. The detailed technic of the examinations will, of course, not be of interest to the majority of those present so no effort will be made to bore you with them. In general, the finding of free air under the diaphragm in a patient with sudden sharp pain and collapse in whom a perforated peptic ulcer is suspected is sufficient to prove this diagnosis; a similar spontaneous pneumoperitoneum in a patient with a gunshot wound of the belly is sufficiently definite proof of an intestinal perforation to justify this diagnosis and serve as a guide for operative interference at such time as in the surgeon's opinion it is indicated. Many a surgeon has been saved the embarrassment of doing a laparotomy for acute appendicitis by the finding of a stone in the right ureter. Among the conditions which do not necessitate such early operative interference but in which the roentgenologist may give a measure of assistance are the finding of an elevated and fixed diaphragm, with possibly free gas and a fluid level, in a sub diaphragmatic abscess and the diagnosis of diverticula may be of value.

The discovery of the transverse colon lying between the liver and the diaphragm, of a hernia of the stomach or a section of intestine through the diaphragm, of a pneumonia, of pus in the chest, of an unsuspected lung condition rendering ether anesthesia inadvisable are often of material assistance to the surgeon.

In probably no other acute abdominal condition can the roentgenologist be of greater help than in acute intestinal obstruction. From a single film, always without the administration of the barium meal, frequently with the mobile or portable x-ray machine at the patient's bedside, we are usually able to state positively that the suspected case is or is not one of acute ileus. We have seen definite instances in which such patients have come to operation six to twelve and even twenty-four to forty-eight hours earlier than otherwise would have been the case

DISCUSSION

Dr. F. K. Herpel, W. Palm Beach:

Time does not permit a very elaborate discussion of the many points touched on by Dr. Feaster. And it is not necessary at this time to make any comment on the necessity of a roentgenological consultation because all progressive surgeons and internists are increasingly using the roentgenologist as a consultant rather than as a technician.

May I cite one case bringing out a point which was not covered by Dr. Feaster. Several years ago, while practicing in a far western city, I was called one night about eleven o'clock in consultation to see a ten month old infant. This child awakened during the night crying with pain. The abdomen was palpated and found to be rigid. The child did not have any material elevation of temperature but was obviously sick. Realizing that the diagnosis of pnenmonia might be complicated by the presence of abdominal pain an examination of the chest was suggested both by the surgeon who had seen the child and by myself. Examination of the chest, however, was entirely negative. However, upon fluoroscopic examination a common pin was found lying in the region of the duodenum. As in most right-sided abdominal conditions found in small children a strong possibility of appendicitis was considered and the surgeon was at the point of doing an operation for acute appendicitis at the time I was called. The abdomen was opened, and on making

an incision through the peritoneum a common pin was found lying between two adjacent loops of small bowel. Most unfortunately the pin had perforated the first portion of the duodenum. Convalescence, however, was uneventful in spite of the fact that the duodenum had been perforated.

I am firmly of the opinion that if this child had been operated on for appendicitis through the usual incision, this pin, located in the upper abdomen between small bowel loops, would not have been found. I do not believe that a surgeon would do much manipulating in the abdomen of a child of this type.

I simply mentioned this because it was not covered by Dr. Feaster. I am sure he has encountered more than once instances of foreign bodies in the intestines of small children.

I wish to thank Dr. Feaster for the opportunity of discussing his paper.

THE NEED FOR SANATORIUM BEDS IN THE CONTROL OF TUBERCULOSIS*

ARNOLD S. ANDERSON, M.D.,
St. Petersburg.

Tuberculosis is the greatest social and economic disease problem that we have today. Each year in the United States 85,000 people die of the disease. Three out of every five deaths in girls between 15 to 30 years of age are due to tuberculosis. These simple figures are enough to acquaint us with the fact that this is by no means a conquered disease. It is still the king of killers among people 15-45 years of age. The magnitude of its destruction is due to the fact that it is a contagious disease. In dealing with this subject let us keep that in mind. Only by so doing can we hope to aid materially in solving it.

Let us first remember that the two prime requisites for the combating of any contagious disease are education and isolation. By education we attempt to place before the public health facts that will help people to a better understanding of right living. It is, of course, a question of how seriously the average adult takes advice regarding more wholesome living habits. He usually prefers to leave the practice of that to the other fellow. Aquaint him, however, with the fact that beside him lurks a dangerous and deadly disease, that if it continues to linger, it will strike him, and you find that he is exceedingly anxious to provide for himself a cleaner environment. He wants the source of infection removed to a place remote enough so that he may carry on unmolested. If health education does nothing more than stir up the understanding of people regarding the dangers of contagious diseases and the need for their isolation, it serves a great purpose.

The isolation of the infectious tuberculous patient has been a problem of long standing. During the latter half of the eighteenth century European countries were gravely concerned over it. Italy, recognizing its importance, enacted a drastic law which provided that a physician failing to report to the Board of Health a known consumptive should be fined 200 ducats (about $450.00) and suspended from the exercise of his profession for one year for the first offense; and in the event that he failed a second time, he should receive a fine of 400 ducats and exile for two years. The house in which the patient had lived had to be completely renovated and his personal belongings destroyed by burning. When one remembers that the diagnosis of tuberculosis at this period was a thing of great uncertainty—before the advent of the x-ray and the discovery of the tubercle bacillus—one cannot help but feel that much injustice must have been done to those having chest conditions not tuberculous but simulating it. Isolation was accomplished by rigid quarantine of private homes.

Today we find the sanatorium as an important means of isolating the infectious tuberculous. The value of such institutions first gained recognition at the time of George Bodington in 1846. He courageously departed from the bleeding and physics treatment of the day and introduced open windows and good food. He established the first institution in England for the care of the tuberculous. Opposition, however, to this radical departure from accepted methods was so great that the sanatorium idea failed and the institution was converted into a home for the insane.

Dr. Herman Brehmer of Germany was the first to make a success of the sanatorium. He was followed by his pupil and patient, Dr. Peter Dettweiler, who more than his predecessor stressed the importance of rest for the tuberculous.

Dr. Edward Trudeau pioneered the sanatorium idea in the United States and it was, to a great extent, through his guiding influence and enthu-

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siasm that the sanatorium achieved its beginning popularity in this country. From the time of Trudeau's first institution, 1884, until the present there has been a steady increase in sanatorium accommodations until now we have over 72,000 beds in the United States for the tuberculous.

This very brief mention of the development of the sanatorium movement is given for the purpose of emphasizing the fact that the use of such beds is by no means a new and untried theory as an aid in the attempt to control the tuberculosis problem. Over a period of eighty years the sanatorium has become recognized as a vital and necessary adjunct in the battle against this dreaded disease. Today the concept is fast becoming crystallized that the sanatorium is first and foremost a place for isolating the infectious tuberculous—it is a guardian of the public health; second it provides the most effective means of treating the tuberculous patient and restoring him to a useful life.

In order to appreciate the importance of sanatorium beds in the control of tuberculosis let us consider in some detail these two mentioned functions.

To find and isolate an infectious case of tuberculosis means that we are removing from the community a spreader of disease. It has been estimated that the average open case infects with tubercle bacillus at least seven other persons in the community during the life of that individual. If that is true we can readily see how necessary it is to find and remove early those who serve as disseminators of the disease. To do this effectively it is essential that the health department and the sanatorium be linked together as closely as possible.

The epidemiological service and the police power invested with the health department makes it the indispensable agency for handling any contagious disease and for that reason it would seem advisable to have directly under its supervision institutions for the care of the tuberculous. This would permit of a field service that could use the sanatorium as a quick and efficient means of isolating those needing segregation. Without such a service the sanatorium is doing only a part of its necessary work.

The second function of the sanatorium is concerned with the treatment of the tuberculous individual. Two things are essential here. First, the patient must be taught enough facts about the disease to make him recognize and practice such precautions as are necessary for preventing the spread of the disease to others. He also must learn enough about the nature of tuberculosis to help him in healing the lesion as soon as possible. This educational feature of the cure is of vital importance to the best therapeutic results. Second, every known means, medical and surgical, must be made available for the patient in order to aid in his recovery. The proper application of the rest treatment, good nourishing food, comfortable surroundings, and the use of collapse therapy in selected cases are all necessary in bringing to the patient the desired results. When these measures are used at their best the patient is reurned to his community within the shortest possible period of time. He may again take his place as a useful citizen.

The number of sanatorium beds necessary in the tuberculosis program depends upon the following factors:

1. The number of tuberculosis cases or deaths in the community.

2. The environment to which the discharged patient is permitted to return. With good home conditions an earlier discharge is permissible and so a more rapid turnover of sanatorium beds is allowed.

3. The type of care received at the institution. Where good medical and nursing care are obtained and where surgical facilities are at hand for collapse therapy, a goodly percentage of patients are made ready for earlier discharge than would otherwise be possible. In the Minnesota County Sanatoria for the year 1932, approximately 35 per cent of the patients received some form of collapse treatment, a fact which permitted a much more speedy return to the home environment.

4. Organization of the work as a whole determines to a great extent the number of beds required. Efficient supervision of the field service, and the admission and discharge of patients will help considerably in making a more rapid turnover of sanatorium beds.

It has been estimated that generally speaking, two beds for each tuberculosis death in the community is required to accommodate the needs of a locality. Formerly the ratio of one bed for each death was thought sufficient but later experience has shown that that hardly fills the needs.

In the state of Florida during the year 1932 there were 1,093 deaths due to tuberculosis. There are 274 beds in the state. If we take the

old ratio of one bed for each death we find a shortage of 820 beds. It is safe to say that the control of tuberculosis can hardly hope to be attained with a lack of such an important item. We need sanatorium beds for the isolating of sources of infection and for the treating of the tuberculous sick; otherwise disease spreads and continues to advance.

But while we are stressing the necessity for such beds let us not forget that of prime importance is the development of a plan which will oragnize all aspects of the tuberculosis problem. Unless these beds are utilized in an efficient and orderly manner such as is possible only through a properly regulated field service, their value is minimized. A plan for tuberculosis control is necessary that considers each locality of the state as a unit of the whole. Tuberculosis is a state problem rather than a county one for a tubercle bacillus can cross a boundary line insidiously and without respect for geographical limitations and so its spread must be attacked by state forces rather than by local ones.

A plan for the control of tuberculosis in Florida will take into consideration the organization required for finding and removing sources of infection as well as the number of beds required for those needing care. It will recognize the necessity of bringing into harmony all those forces in a community that can be instrumental in working toward a worthy end. It will bring clearly into view the fact that it is much more economical to prevent a case of tuberculosis than treat it. The thousands of dollars spent in an intelligent plan for controlling tuberculosis is but a pittance compared to that required for treating decently those who otherwise would develop the disease.

It is now over fifty years since the cause of tuberculosis, the tubercle bacillus, was discovered and that the disease spreads from person to person by virtue of this organism. We have learned about means of preventing its spread. We know that if we remove a person from an infectious environment before he becomes infected with the tubercle bacillus he will not develop the disease. We have amassed much knowledge, which if practically applied, would sink the death rate of tuberculosis down to a minimum. But so far we have failed to profit fully from it. The application of the facts have been far behind the realization of their worthiness. And so again we recognize the truthfulness of Tennyson's dictum, "Knowledge comes but wisdom lingers."

THE PREOPERATIVE AND POSTOPERATIVE MANAGEMENT OF SURGICAL PATIENTS WITH MENTION OF CHOICE OF ANESTHETIC*

J. RALSTON WELLS, M.D.,
Daytona Beach.

Lord Moynihan's phrase, "Modern aseptic surgery has made the operation safe for the patient; it is now the aim of surgery to make the patient safe for the operation," is truer today than when first spoken by that great English surgeon. To have a patient survive a major operation is not an achievement, but *how* that patient progresses, and the benefits he receives because of surgery, is the concern of present day surgery. The mere technique of an operation may be difficult at times, and requires the memorizing of the various steps as laid down in a text book. Poor preparation of the patient, however, may spell success or failure in any given operation; or careless postoperative care may nullify an otherwise brilliant success. In addition, surgical judgment, accompanied by surgically trained handling, may cause a simple procedure to suffice and produce better results than a spectacular major operation undertaken without adequate study and preparation. A test for a surgeon is knowing when to, and when not to, operate, rather than how to operate. I would far rather trust the surgeon of fair operative ability, using intelligent, careful, preoperative and postoperative treatment, than the one of careless preoperative and postoperative attention but brilliant table technique. An emergency operation is never enough of an emergency to do away with the major preoperative laboratory and hospital procedures. Certainly in an operation of choice (deliberate operation) the patient should never enter an operating room within a few minutes after arriving in a hospital. Such procedure is to be rigorously condemned. Because some operators "get away" with such procedure is no argument in its favor; it may be a stigma not only upon the operator but upon the profession of surgery in general, and bring harm to the patient.

To be able to deal with complications is necessary, but to know how to avoid these conditions requires a higher degree of surgical skill. There is no way for a young surgeon to learn these pitfalls better than by the side of a careful, kindly,

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and yet exacting, conscientious senior. They cannot be learned from books, and are far beyond the realms of "horse sense."

Above all, we must remember the surgeon is, or should be, an humble personage; the patient is the important actor, and all others are subordinate. A failure, or a success, with any one patient, judging from end results, will very often convince the most skeptical of this fact.

Preoperative preparation starts with the surgeon and his associates, including his assistants and nursing staff. Aside from the added pleasure to all when working in harmony, the patient receives the benefit of this cooperation. It is feasible and practical to maintain an attitude to your subordinates of kindness and consideration. The attitude of false superiority, or being "high hat", if you will, is mentioned only to be condemned. This attitude is generally only assumed, however, by the operator of little experience in order to "put something over" or under the false idea of "making an impression." Therefore, I place thorough understanding and cooperation, one with another, between the surgeon and his working associates as of prime importance in both preoperative and postoperative preparation and care. If juniors had the knowledge of their seniors they would not be juniors. Knowledge is acquired, and takes time, but cooperation and understanding can be had at the onset by all concerned and should be cultivated, starting by example and precept of the surgeon. A feeling of comradeship is essential; a dictatorial manner is very often a cloak for ignorance.

A thorough physical examination and an accurate diagnosis are necessary. A local deformity or pathological condition may be understood but the corrected results of this, no matter how skillfully operated, may rest entirely upon some distant irregularity of the general economy. Remember that the saying "a surgeon buries his mistakes" may not be an idle phrase, and may not reflect upon technique, but upon a careless physical examination, or a lack or regard for laboratory findings.

There are two great classes of operative surgery: those requiring emergency operations to save life itself, and those of choice to rehabilitate, or to correct conditions, for which there is more or less time at our disposal in which to make adequate preparations.

The Emergency Operation.—Unless we are dealing with an acute accident, rapidly oncoming shock, or hemorrhage (internal or external) there is adequate time for a history of past or influencing conditions and a urine and blood examination. The history very often must be obtained from a third party, and may be of no value. On the other hand, it may be the means of avoiding a complication or mistake. For example, an apparent acute appendicitis, if preceded by a cough, or even a severe coryza, may well be a right basal pneumonia with referred abdominal pain. A strangulated hernia of small size may readily be confused with appendicitis. On the other hand, a psoas abscess, not complete, may need immediate operative relief, and be confused by a diagnosis of ureteral stone. In like manner, a ruptured gastric, or duodenal, ulcer may be thought to be gall-stone colic. An adequate history will often indicate and avoid these pitfalls.

Routine blood and urine examinations should never be omitted, no matter what the emergency. If time is not sufficient to rectify a condition preoperatively, at least it is a guard against postoperative complications. Not infrequently, even during haste, preoperative measures may be taken —urine sugar, hypodermic of insulin; slow coagulation time, a hypodermic of a coagulant; severe anemia, a blood transfusion; severe nephritis, intravenous saline; and so on. How many of us have altered our diagnosis, and have avoided an emergency operation of an acute appendicitis when confronted with pus, or red blood cells, in the urine? Again, in emergency operations, a patient presenting a persistent vomiting, a long-standing diarrhea, or an evident acidosis, or other similar dehydrating conditions, may make an uncomplicated recovery by the rapid preoperative administration of water either intravenously, or under the skin, or both. The question of water balance will be taken up as we go on.

Operation of Choice.—Here the history is of even more value and the laboratory essential. The practice of medicine is that of deliberation, and surgery that of action. In this type of operation, surgery should be deliberate action and unless the surgeon is one of those men of rare qualities the help of an internal medical associate is both necessary and wise. It may take days, or weeks, to prepare a patient for a major surgical procedure, if for example our patient has an anemia, tuberculosis, slow coagulation time, severe nephritis, or one of several other basic conditions. From a medical economic viewpoint, this type of procedure, while of prime benefit to the patient, also offers a satisfactory solution

of the problem of adjustment of fees between the internist and the surgeon, the preoperative, and, after acute operative results permit, the postoperative convalescent period, rightfully going to the internist, with consultation of the surgeon if cooperation is ideal.

This preoperative preparation may be continued endlessly by multiplicity of generalities. In mentioning a few of the basic sound practices, the water balance has an important place, particularly if the kidneys are diseased. It is hardly possible to drink too much fluid, even if the amount is not being eliminated as gauged by the urine. If the output is 1500-2500 cc. per 24 hours, the intake is sufficient. On the other hand, if the stomach is intolerant, hypodermoclysis may be the route of choice, or rectal installations. Until the kidneys are secreting 1500 cc. or more per 24 hours, they should not be considered adequate. This question of water balance is one of our most important considerations, both in preoperative and postoperative management.

A condition that is not fully understood may be called "emotional imbalance." This term is not new, or original, but its portent is always capable of having new interpretations, call it pessimism, apprehension, premonition, fatalism, or what you will. This type of patient should be studied very carefully. An unlooked-for internal glandular secretory derangement, a nerve syndrome, a history of near fatality at a previous operation, possibly only a minor one, may be found and corrected, or avoided. Here the anoci-association of Crile is most necessary. I have found that the judicious use of bromides, small opium or barbituric acid doses, digitalis or strychnine, very often changes our outlook. The will to get well, I firmly believe, plays a great part on our ductless glands as aids to recovery; the reverse is likewise true.

Routine purging of the bowel, except in special cases, should be avoided. The nearer the bowels are to normal preoperatively, the better postoperatively. Two or three enemas in the twelve hours preceding operation are rational and adequate to free the tract of waste products.

It is not necessary to state that the patient should spend from twelve to twenty-four hours preceding operation in the hospital. Necessary laboratory work, local and general preparation, adequate sleep, and attention to the diet, are all a part of this phase of preparation. Judicious use of bromides are rarely contraindicated and a quiet nervous system is assured. A mild slow coagulation time may be speeded up by the use of dicalcium phosphate; a highly acid system be reduced by alkalies; a mildly rapid heart may be made less rapid and stronger by digitalis. This discussion will not permit preparation in special cases; for example, gastric resection, toxic thyroids, all clean bone, cranial, or kidney work. These are special subjects and must be treated as such. Do not fail to place all pediatric surgery in a special class also, because the surgeon overlooking this fact will come to grief many times.

The matter of blood pressure is one of wide limits and needs, with the exception of very high or very low, no special consideration. Moot's rule has been of little value to me in this connection. The extremes are readily taken care of in the general preoperative preparation. They usually are of special interest in the choice of anesthetics. The presence of syphilis, diabetes mellitus, and tuberculosis are not contraindicative to operation but should be noted and guarded against in postoperative care.

I have purposely avoided skin preparation, because this is part of operative technique. Tincture of iodine 7%, or picric acid 5%, are always dependable and inexpensive. The various new mixtures, unless the surgeon is able to check results bacteriologically, form a serious problem. Watery mercurochrome is of low bactericidal power; tincture of metaphen apparently is of value, and does not readily form a burn. This is a subject for more general discussion.

Posoperative Care.—To avoid the majority of the postoperative complications, attention to the foregoing preoperative points will be found helpful. The normal postoperative procedure should be of two kinds: keeping natural laws, and watchful, careful, and minute attention to detail. An intelligent nurse's chart is invaluable. A careless chart is not only of little value, but may be misleading and dangerous.

Our postoperative care depends to a great degree on anesthetics, or combination of anesthetics. Massive collapse of the lung is thought by some surgeons to be always present. Attention, therefore, to the kind of air, and the amount, is important. Cold, damp air, congested, over used and "stuffy" air are all to be avoided. Exposure of the chest, abdomen, or extremities, should not be allowed.

The Water Balance.—Obviously in most operative cases, with notable exceptions of thyroid, amputations, and bone work, water by mouth is not desirable. The stomach absorbs very little

water per se. Water by rectum is logical. I disagree with many surgeons, and condemn the "drip method" in any form. It is hard to maintain, expulsion by the patient is often hastened by the irritation of a tube in the rectum, and whether any fluid is expelled or not, it is difficult to accurately measure the intake. Above all, it is decidedly uncomfortable to the patient. Having had the personal experience, I am in a position to speak feelingly. Any persistent discomfort in the first hours after an operation may give us a restless, nervous patient. I use the small enemas entirely and find that four ounces of fluid, repeated every three to four hours, will be retained until the stomach can be relied upon. I have found that when the stomach is retentive, the rectum will expel and rarely before. My routine procedure is to give one pint of tap water immediately after operation, followed in four to six hours by regular installations of four ounces every three hours until the stomach retains it without nausea.

Position in Bed.—The position assumed by the patient is based upon entirely different premises than a few years ago. The disease and age are usually the considerations rather than the kind or position of the wound. Three main positions used, aside from the usual dorsal recumbent, are the Fowler, Sims, and Trendellenburg. The cranial, neck procedures (thyroid), pelvic, or general peritonitis, are best in Fowler's position; gastro-enterostomies and many abdominal drainage cases are most adequately treated in Sims' position; brain, anemia of the brain, vomiting or unconscious patients, are often benefited by the Trendellenburg. The position of dorsal recumbent should not be allowed for long periods of time; a turn to one side or the other is of great value in preventing or relieving postoperative abdominal distention.

This condition can be avoided to a great extent by using only hot fluids until intestinal peristalsis is well established, avoiding the use of relatively unimportant drugs, including the stomachics, digestants, syrups, fruit juices, milk of magnesia, and any foods that contain nourishment that require many metabolic processes to be assimilated.

Postoperative ileus is a discussion of too much length to enter into here; suffice to state that gentle handling of abdominal contents, avoiding general operative shock and prolonged anesthesia, avoiding certain drugs, especially atropine, will often obviate this troublesome, and at times alarming, condition.

A discussion of proper postoperative conduct would be incomplete without mentioning the sedative drugs. Opium in the form of morphine, dilaudid and codeine, is a necessity. It is my habit to give these drugs soon after the patient leaves the operating table, so that the fading narcosis may be overlapped by the increasing opiate. Freedom of pain adds to the patient's morale, obviates unnecessary irritation of a depressed nervous system, and does not add to a slowed or absent peristalsis. Opiates should be given freely in adequate doses for the first twenty-four to thirty-six hours, postoperatively, and then gradually withdrawn as circumstances indicate. At times morphine sulphate apparently excites a vomiting reflex. For this reason I habitually use dilaudid which appears in my hands to be almost without this distressing symptom. Codeine can often be substituted for its stronger sisters. A fact which must not be lost sight of is that opium, especially morphine, used in small doses, repeated with relative frequency, is a decided cardiac stimulant and thus may perform a double duty if necessary.

The usual patient can easily withstand a two to three day relative starvation. Do not push food, rather let the patient push you. The return of the appetite is one of the best indications when to resume nourishment. Hot water and hot tea are the two best foods for the first forty-eight to seventy-two hours. More errors will be made in giving food too early than too late. When in doubt, do not give food.

Wound healing decreases for the first three to four days, then increases rapidly to the twelfth or fourteenth day, with firm aponeurotic repair at the end of the twenty days. With this in mind, the time for allowing the patient to get up can be easily decided. Patients who have undergone operations of purely muscle splitting at cross angles can with safety be allowed to leave the hospital in six or seven days (the small transverse abdominal appendix incision). When the operation has been the longitudinal muscle splitting of upper abdominal, or lateral abdominal, incision the patient may usually leave on the tenth or twelfth day; the same is true in lower abdominal operations; in hernia repairs, the twenty-first day. I have found the above a safe guiding table. This is of course for clean first intention healing wounds.

A word about anesthetics: It is the duty of all

surgeons to decide upon the anesthetic for each case, based upon the preoperative findings together with the kind of disease and location of the disease. The anesthetic must be fitted to the patient, not the patient to the anesthetic. I venture to make a sweeping statement, knowing a storm of criticism may result, and I will readily grant there may be exceptions due to individual cases, but preceding all general and many local, or spinal anesthetics, the patient should be given some form of sedative. The use of the various barbituric radicals have filled a long-felt gap. From the early days of veronal to the present, I have used one form or another of a pre-anesthetic preparation to allay sensory acuteness. Having used avertin, barbital, and sodium amytal, I have for the past two years found that nembutal (pentobarbital sodium) administered intravenously gives me the most satisfactory patients. It has quick action, is readily controlled as to dose, and induces sleep in from one to three minutes without dreams. Postoperative nausea is reduced to not over two per cent in all classes of cases. There apparently is no untoward effects if doses of less than seven and one-half grains are given, although I have given higher without alarm. The effects are short, giving not over three to four hours, but may be lengthened by the insidious use of dilaudid or codeine. The patient, if anesthesia is preceded by a sleep-inducing preparation, requires far less of the anesthetic; avoids the "stage of excitement," as well as the conscious physical shock of operating odors, noises, and sights. The pulse and respiration usually are kept on a normal plane, and kidneys and lungs are far less likely to give postoperative complications. The special operations usually require particular anesthetics but in general, short operations, chloroform or nitrous oxide-oxygen, with or without carbon dioxide, are excellent; for longer procedures ether or spinal anesthetics usually are chosen. In cases of intestinal inflammation, peritonitis, or obstruction, spinal anesthesia is that of choice, providing the patient is cooperative. Spinal anesthesia has long been a pet subject of mine, as I have used for over fifteen years a preparation of cocaine. However, in the past year, I have used several other preparations, which under certain circumstances seem to be more easily handled.

This treatise is unduly long but touches only upon the rudiments in the conduct of operative cases as I have seen them. The pronoun "I" may have appeared many times, but it is the individual opinion for which we all seek and not a rehashing of some stereotyped truisms. Some of these, to be often repeated, must be necessarily true, and are therefore repeated here, but only when they have been both tried and omitted, and have proved of basic value in personal experience.

SUMMARY

Preoperative: Staff cooperation; history completeness; thorough physical examination; accurate diagnosis; attention to laboratory findings; special measures for various types of cases.

Postoperative: Attention to preoperative care; attention to history and physical findings; attention to special measures for various conditions.

Anesthetic Choice: Using a pre-anesthetic preparation; fitting the anesthetic to each case.

SOME COMMENTS REGARDING THE PSYCHOTIC*

A. T. Cobb, M.D.,
Chattahoochee.

With your permission I shall digress from the usual routine in a meeting of this type and present some interesting observations and notations relative to our mentally ill. In all probability you and even my colleagues at this Institution may not agree with some of the statements I make. They are, however, my honest opinions formed from my observations and from study of available literature. If wrong, I am open for conviction.

It has been stated, "the mind is the human being in action." It can not be separated from the physical problems of any patient. Its study in the future will play a larger and larger part of the therapeutic efficiency and social usefulness of every physician. One person out of every two hundred and seventy in the United States is psychotic; two per cent of our population is feebleminded; approximately 75,000 new patients are admitted each year to State hospitals; more beds are occupied by mentally ill than those ill from all physical diseases combined. Is it then any wonder that preventive psychiatry should be and is truly the coming field of medicine? Psychiatrical training in medical schools is woefully inadequate and must be expanded if the graduating physician of today is to be properly equipped to practice his profession.

Within each and every one of us there are certain instincts, wishes and emotions attempting

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to direct our thoughts and action. Opposed to them are the ideals of the individual, the conventions and demands of his social group. If the latter win, the individual is able to adapt himself to his environment and belong to the so-called "normal" group. If not, he is psychotic. Heredity and environment are thus both playing a part —environment, I believe, the more important. In every community and about every physician are people, not now mentally ill, but definitely prepsychotic. There are the peculiar, seclusive, "shut-in" type, considered by parents as an ideal child, but destined to become a dementia praecox. The depressed phases of the manic depressive psychoses come from the moody, pessimistic, subject to periods of depression type, and the manic phases from the overactive, happy, talkative, "life of the party" individuals. It is the depressed individual who does himself bodily injury and many unexpected suicides are probably unrecognized depressed phases of manic depressive psychoses. Threats of or aborted attempts at suicide can not be lightly taken; another and possible successful attempt may follow. A most pathetic condition is a well respected family of comfortable means reduced to poverty, disgrace and shame and mentally tortured by the poor business judgment, shameless immorality, and alcoholic debauches of an erstwhile exemplary father and husband—an early paretic, unrecognized by family or physician. We can not expect or hope for the lay people to recognize these things. It is the burden and responsibility of the family physician who should recognize them, take proper steps, and offer correct guidance.

Certain psychoses have definite causative factors as those resulting from pellagra, syphilis, and the exogenous toxins, morphine and alcohol. The great majority are functional in type and have no definite physical background. Here heredity, instinctive and emotional forces, and the conflicts of life come into play more than in the usual physical conditions. Brain tumor, contrary to the usual belief, is a causative factor in only .2 to .5 of one per cent of cases admitted to state hospitals. The figures quoted were reached from autopsy findings in a large series of cases. Even when present diagnosis is difficult.

The economical depression has been frequently referred to as an important factor in causing an increase in mental disease. This is without foundation. Not withstanding the fact that because of this economical condition we now have many people admitted here that in normal times would have been cared for at home or in private institutions, we had admitted in the year 1929, one of fair prosperity, 1351 new patients and last year, the one of greatest depression, we admitted 1157, a decrease of 14 per cent. May I add the same refers to overwork. It does not cause psychoses but the mentally ill in the early stages, when making a desperate effort to escape an unsolved mental conflict, may show unusual physical activity.

Pellagra is a fairly common cause of mental disease, but the pellagra in many patients admitted is secondary to their mental condition. Particularly does it appear in the depressed conditions, where nourishment is poorly taken. Here a difficult differential diagnosis arises. Frequently time alone will tell. Pellagra comes from rural more than urban districts and by far most of it from the western part of this state. Using the white female division, over a period of the last three years as an index, I find that 69 pellagra patients were admitted. Twenty-nine per cent proved to be secondary to the mental condition. Seventy-one per cent came from points west of Tallahassee. Three adjoining counties of West Florida, namely, Holmes, Washington, and Walton, which make up 2 per cent of the state's population, furnishes us with 45 per cent of our pellagra. Hookworm disease corresponds very closely with this geographic distribution. Pellagra is a preventable dietary condition and is cured by proper diet. Our results in treating this condition are very good. We use a well-balanced general diet and find that Brewer's yeast and other vitamins are not necessary. Due to known fact that these people frequently have a low or absent gastric acidity we have used dilute hydrochloric acid in adequate doses, which are larger than the pharmacopeial one, to a good end in treating the accompanying diarrhea. This is likewise true in treating cases of diarrhea in which no definite pathology is demonstrable. In turn this suggests their origin in low gastric acidity.

The importance of focal infections as causes of mental disease has been and still is overestimated. I frankly do not believe that they cause many if any major psychoses. Mental patients are notorious for lack of care of teeth and body in general. Infected tonsils seem more common but they are results rather than causes. True it is that toxins play a part, alcohol and morphine as exogenous ones in particular, but to make a

diagnosis of toxic psychosis, the toxin supposedly arising from an endogenous point and without definite physical stigmata of an advanced toxic state, I can not. Watch those in whom a diagnosis of toxic psychosis has been made over a long period of time and you probably will be forced to change. When patients previously admitted and diagnosed toxic have returned in a definite clinical type of psychosis, we must conclude that we were wrong. These foci of infection may, in so far as they contribute to physical weakening, be considered as minor contributing factors, but the theory that they cause major psychoses has stood neither the test of time nor clinical experience. Many times I have seen patients with teeth more or less out, tonsils gone, or just over an abdominal operation, who had been promised health therefrom, but find themselves here because of an advancing mental state. Such incidents certainly give no credit to our profession. The surgeon who becomes quite elated in thinking he has cured a psychotic condition by removing tonsils or gall-bladder, or the dental surgeon by removing the teeth has probably failed to recognize the influence of Father Time which is, after all, the great factor in recovery of functional psychoses. These conditions which clear up quickly and completely are in all probability the first attack of a manic depressive, and if this same surgeon or dentist will treat his patient over a long enough period of time he will probably find his same patient in the same mental state but with no tonsils or teeth to remove.

Much along this same line may be said in regard to trauma. We do have traumatic conditions, but not near so commonly as the laymen and even some of our own members seem to believe. The reference of a mental condition to some injury in childhood and with many years of good mental health thereafter appears quite unreasonable.

Psychiatrical knowledge is advancing and we can no longer be contented with attaching psychoses to certain epochal periods of life. I refer particularly here to the so-called menopausal and puerperal psychoses. It must be understood and fully appreciated that the strains incident to pregnancy are great, but they are not true causes of mental disease but only precipitating agents in the outbreaks of various psychoses, particularly dementia praecox. White, a recognized authority, states "There is no such thing as puerperal psychoses, strictly speaking." Mental disorders should be classified according to symptoms produced and not to time it occurs. We would be as justifiable in making a diagnosis of "exposure" pneumonia in a definite lobar pneumococcic type. The same conclusion may be reached about the period of menopause. Here the onset of manic depressive and involutional conditions give rise to the erroneous opinion that they are the result of the menopause. Consult recognized modern textbooks of psychiatry, or the classification of mental disease of the American Psychiatrical Association, and I believe you will find very little, if any, recognition given to these so-called epochal psychoses.

Menstrual disturbances are common in mental patients. Much of this is due to debilitating conditions and is a protective mechanism such as we see in physical ailments. Carefully taken history will usually reveal the onset of mental symptoms before the amenorrhea. Here I would like to mention the necessity of a very discriminate use of Theelin or other such powerful stimulants to the female reproductive organs lest we aggravate an already mild or precipitate a potential psychosis. If we do not actually produce a major mental ailment we may only add to the mental suffering of those in whom the nervous state is the result of a long continued repressed sexual desire.

Those connected with mental diseases see much of the distressing condition of migraine. According to recent literature many of those cases are the result of vitamin deficiency and its resulting blood calcium disturbance. I am apparently getting excellent results in the use of Viosterol as a prophylactic for this condition.

There is a definite sex distribution of the psychoses. In accordance with the fact that the males take a greater part in the stresses and strains of life and at the same time enjoy more freedom we find the resulting psychoses as alcoholism, cerebral arteriosclerosis and spyhilitic conditions far more common in them. The affective psychoses as manic depressive are more common in the females. All in all, males predominate.

Drug addiction and alcoholism are common. They may come here, their tissues be freed of the toxins, and then released, but most of them are soon with us again. They do not possess sufficient self-control or will power to refrain from imbibing or they would have never been here the first time. Many belong to the constitutional psychopathic, never-do-well-anywhere group. Some cases represent symptoms of defi-

nite clinical types of psychosis, particularly the manic depressive. The drug addicts as a rule are the most pathological of liars, and cannot be trusted. They will go any limit or use any means of obtaining the drug when on the outside, to bring it into the institution with them or even to get it to a fellow addict, be it their own child. There has been discussion regarding alcohol as a predisposing cause of angina pectoris. In the light of recent literature this seems unlikely. I do not recall seeing this condition in any case of alcoholism here. A warning should be given in regard to the use of hyoscine in these or any psychotic lest we add a belladonna delirium to an already difficult situation.

Only a small percentage of epileptics are admitted to state institutions, but we have many. Little do we know about them and there is much we should know. Here exists a wide field for research. I have noted in my contact with them that hypotension and the lack of cardiovascular disease seems unusually common. Our therapy is discouraging except in the states of status epilepticus where I. V. sodium amytal is an effective and quickly acting remedy. The drug is potent and dangerous. It must be used only when occasion demands. In the normal individuals many hours of sleep follow injection of 15 grains. I have seen very maniacal patients sleep only thirty minutes.

The psychoses are relatively more common in the single and divorced, personality makeup preventing marriage in the first and prohibiting domestic peace in the latter.

Paranoid conditions are common but true paranoia is rare. The paranoiacs kill an unsuspecting and frequently innocent person upon whom they have attached their delusions. The praecox is the one who commits the weird barbarous crimes such as murder of their own entire family.

Surgery of the psychotic is different to a certain extent from surgery of the non-psychotic, but I dare say it is just as satisfactory and yields equally as good results. The cooperation of the patient and a smooth convalescence is the rule and not the rarity as one not accustomed would think. Some knowledge of psychiatry is a prerequisite and nurses trained in mental disease a necessity. The acute maniacal should not be operated upon unless necessary. The badly depressed individual is a poor surgical risk as he does not have a desire to live and difficulty in giving nourishment may be encountered. The cerebro-spinal syphilitic patients do not stand trauma or any type of anesthetic well. Spinal anesthesia is absolutely contra-indicated. This brings to mind that every surgeon should think of this possibility and examine the spinal fluid of every syphilitic before administering a spinal anesthesia.

Many feeble-minded people either are or have been married. In most instances their mate is feeble-minded, their families are large, and the earning capacity of the head of the family small. What chance do their children have? Poverty accompanies feeble-mindedness. Their number is ever increasing and sooner or later the poverty will not only affect them but every one in our state who must tax themselves to support and perpetuate these people. If our country can draft our choice and splendid young men to give their lives for the country and the welfare of the entire social group, I do not see where it is not justified in forcing these mentally unfits to become subject to sterilization or segregation. I am positively in favor of adequate sterilization laws in this state. Furthermore, some feeble-minded and other psychotics admitted are illegitimately pregnant, and I firmly believe there should be legalized abortions in these cases before viability and to be done in the state hospital after their sanity has been passed upon by its examining board. It would seem to me to be relief for the mentally incompetent and their already burdened family and mercy for an unborn child.

In my mind it is the patriotic duty of every member of our profession to make of himself a leader in the recognition and prevention of these mentally ill and encourage the passage of such laws and measures as will stop this ever-increasing burden upon our taxpayers and which, if not controlled, may ultimately undermine the stability and intellectual greatness of our country.

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FLORIDA ONE OF TWO STATES HAVING LAY SUPERINTENDENT AT STATE HOSPITAL

An extremely grave situation now presents itself with regard to the State Hospital for Insane at Chattahoochee. The chain of circumstances producing the abnormal and wholly illogical arrangements for the conduct of the hospital have been inexorably forged by the responsible authorities since the death of Doctor Folmar, the last medical superintendent to serve at the institution. These developments have been so at variance with well established and proper methods of institutional management that the future of the hospital and its inmates has unquestionably been placed in jeopardy. Their defense and protection is wholly now in the hands of the medical profession, upon whose courage and initiative rests the hope, both of the reformation of the conduct of the institution and the care of the unfortunate human beings behind its doors.

A summary of the dubious circumstances which have characterized the plans of the hospital control and management have been given you in a recent article in this Journal. More recent developments give promise of such hazardous impairment of the welfare of the institution and its unfortunate inmates that the profession as a whole should be thoroughly informed in all the disturbing details.

It must be remembered that most of the recent acts of those in control have succeeded their study of a report of the National Committee for Mental Hygiene, following a complete and exhaustive survey by the latter, said survey having been requested by the State of Florida. The report contained a number of strong recommendations as to management of our largest state institution, and urgently recommended the appointment of a medical superintendent. It is the apparent tendency of the Board of Commissioners of State Institutions to completely ignore this recommendation, that impels us to place in the hands of the entire medical profession all of the facts.

Details of the management of the State Hospital should be of most vital concern to the Board of Commissioners of State Institutions. They are dealing here, not with a prison camp or a reform school, but with what should be a highly and efficiently organized medical institution charged with the care and treatment of over four thousand of the most unfortunate human victims whose illness and not crime places them in the supposed humane and compassionate charge of a great state. To give political consideration to the plan of administering to these invalid charges is not only basically illogical, it is cruel, it stains the name of the State, and gives rise to grave question as to the motives of an administration condoning such a procedure. The first and last, one and only, consideration facing those in authority over such institutions is the medical care of those mentally sick that it houses. Any deviation in the slightest degree from this consideration constitutes a willful betrayal of these thousands who are sick, and who are deprived of liberty and are powerless to raise their hands in self defense.

Let us see briefly what circumstances have arisen recently that might justify us in questioning the acts of our Board of Commissioners of State Institutions. Doctor J. Q. Folmar, the medical superintendent of the hospital, died on duty in 1932. Doctor J. H. Pound, resident surgeon there, was made acting superintendent. He stated he did not wish the superintendency because he believed he was not equipped to serve in an administrative capacity and did not desire to abandon professional effort. A short time later Mr. Thomas, then Purchasing Agent of State Institutions, Tallahassee, though in ill health, was appointed superintendent. He assumed the position but was too ill to serve properly in that capacity. During this time the Florida Medical Association, obviously concerned with such a condition involving the care and

treatment of these unfortunates, appointed a committee to study the circumstances and make proper recommendations to the Board of Commissioners of State Institutions. The committee was appointed at the meeting of the State Medical Association May 1st, 1934. Some weeks later it developed that a lay superintendent was about to be appointed. On July 14th the committee sent copies of its findings and recommendations to the Governor and his cabinet, who constitute the Board of Commissioners of State Institutions. In these recommendations it was set forth in detail the numerous and convincing reasons for the appointment of a doctor of medicine, trained in psychiatry. It was naturally assumed by the committee that the survey of the National Committee for Mental Hygiene, which had been placed in the hands of the Board of Commissioners of State Institutions, had been perused and its incontrovertible findings and unbiased recommendations, especially that a doctor head the hospital program, had been given credence by the Board. Apparently the valuable advice of the National Committee for Mental Hygiene was "a scrap of paper." The survey was a wasted effort.

The committee was informed that a lay superintendent had been appointed. We were informed that Mr. J. H. Holcomb, Superintendent of St. Luke's Hospital, Jacksonville, had been tendered the appointment. Contact with Mr. Holcomb developed the fact that he had declined to accept the appointment. Telegrams were then sent each member of the Board urging them to reconsider his arbitrary stand and to follow the strong recommendations of the National Committee for Mental Hygiene, international authorities on this question, and to appoint a highly trained physician as superintendent. Every effort had previously been made by the committee to develop in the Board a thorough understanding of the many special problems involved, a realization of the State's responsibility to the hospital inmates and how these responsibilities could be most easily, efficiently, and humanely discharged, but to no avail. One member of the Board expressed himself as being tacitly in favor of a medical superintendent, but was entirely misled by a completely false statement that over half of the state institutions for the insane in this country were presided over by lay superintendents. He then joined in a unanimous vote to appoint a lay superintendent.

Colonel Preston Ayers of Orlando, therefore, became the hospital's head and assumed the responsibility of superintending the State's medical care of four thousand humans suffering with that most dreadful of all maladies, and lingering in the perpetual haze which bars them from intellectual and social intercourse with fellow human beings. The Colonel must have had grave doubts as to his capacity for performing the complex, special, and highly technical duties placed upon him.

In referring to Colonel Ayers the writer is doing so in a purely impersonal way. He has had acquaintance with Colonel Ayers in a military comradeship and has a high regard for him. This comment is not directed toward the office holder, but against the method by which these offices are filled.

It is probable that the Board of Commissioners of State Institutions will defend its action of having appointed a lay superintendent to direct the affairs of the greatest hospital in Florida by emphasizing that the hospital needs a business manager and that the medical department can function under the direction of a lay superintendent.

"While it is appreciated that many phases of mental hospital administration require per se no special medical training, there are, nevertheless, medical and certain psychiatric implications in every duty of a mental hospital superintendent. Even such non-medical functions as the ordering of equipment and supplies incurs professional understanding if the welfare of the patient is to be best served.

"Then, of course, the accord of hospital personnel is of prime consideration. Experience has taught that physicians are enabled to give their best services under the direction of an administrator with a thorough understanding of the medical viewpoint. Constant friction is to be expected in an institution where the work of physicians is to be influenced by orders from a layman. No such institution can expect to attract or hold for long the best type of medical personnel."*

So, we sat by and saw the drama enacted. We doctors cannot be blamed for feeling that our state hospital has been placed in the category of a prisoners' stockade, or a penal institution, and

*Letter from H. Edmund Bullis, Executive Officer in Charge, National Committee on Mental Hygiene, Sept. 7, 1934.

that a lay warden has been given police duties over the thousands of lives engulfed in stark tragedy.

The Board of Commissioners of State Institutions alone is responsible for the grave dereliction of duty to our public charges at the State Hospital. They alone are answerable for actions wholly at variance to those practiced elsewhere in the United States, for the care and protection of the curable and incurable insane. They assume the position of authorities superior to that great group of philanthropists, the National Committee for Mental Hygiene, who, without compensation or hope of reward other than serving a great class of unfortunate human beings, have given largely of time and effort to develop the best methods for caring for those who otherwise would be forgotten.

Just what does this arbitrary action of the Board of Commissioners of State Institutions mean? Of the one hundred and seventy-five state institutions in the United States, all but two, and one of the two is Florida, have trained psychiatrists as heads of their institutions for the treatment of mental disease. Must Florida continue to stultify itself by denying to its unfortunate mental charges, the management and care found uniformly to be the best and most humane elsewhere in the entire United States? Must Florida continue to suffer its largest institution to be a political football? Only the Board of Commissioners of State Institutions can answer.

(Signed) RALPH GREENE, M.D.

RADIO BROADCASTS, 1933-34

The following broadcasts were arranged by the Public Relations Committee of the Florida Medical Association and given over station WRUF, Gainesville:

GROWTH, DEVELOPMENT AND MATURITY*

DOUGLAS D. MARTIN, M.D.,
Tampa.

Growth and development are largely interchangeable expressions, though they have a differential significance in child studies. Growth is increase in dimensions; development is a gradual progress toward maturity. Senescence is the decline toward old age and senility: growth naturally presupposes development.

Child life can be divided, for the purpose of description, into the antenatal, neonatal, preschool or runabout and the school age.

Observations have been made on the growth of children from time immemorial, but after all, we have to use some general standard, and this is usually spoken of as the average child. Therefore, the average has to be our guide. Yet, when we compare the average against the given child, we may find wide variation. Then our duty to the individual child is to find out how far he or she may deviate from the average and still be a normal child in growth and development.

How many times have we heard the expression, "Mrs. Jones' baby weighs five pounds more than my baby, and I just can't see why." Well, probably Mrs. Jones cannot see why, but there are many things to be considered in the growth, both mental and physical, of every child.

First, the racial characteristics have to be carefully considered and there is no doubt that racial characteristics in certain geographical locations play an important part in the stature of a great many of our population throughout the world. There is always to be considered the family in paternal growth in children, this being true of one family through several generations. Body types have to be considered, whether the individual child is a lineal type, that is, tall and thin, or a lateral type, short and stubby. This may go down through several generations, true to type, then miss one generation and the opposite condition exist. We certainly must give consideration to this type of growth, and to a great extent it is poorly understood; as far as we know the cause in undetermined.

Certain family traits and manners will be transmitted through several generations, then miss one generation, and engender an entirely different individual, "for better or for worse," so after all we can never safely predict a genius or a "nit-wit."

We must always bear in mind that given two individual children of different, or the same family, the feeding and nutrition of one being as nearly correct as it is possible, the other fed poorly and not properly cared for, at the end of the third year, we have an entirely different picture. The properly fed child will be spoken of as our average child in growth and development, while the poorly fed child will show certain characteristics that will indicate weight and de-

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*Radio broadcast delivered under auspices of Florida Medical Association over Station WRUF, Gainesville, October 29, 1933.

velopment under the average, and the possibility of mental retardation.

Now let us bear in mind, please, that our normal child might in all respects be a normal child, but, with weight and height below the average. Therefore, do not get excited and think you have a child that has to be pampered, gorged, treated and stretched to increase weight and height; let nature take its course, and after a few years you will find your child is not so far removed in development from what is termed the average.

We have discussed growth in the normal child or the child we think of as the average. There are other children that are afflicted with glandular dysfunction that either fail to grow at the proper ratio, that grow too rapidly, or that fail to develop mentally. These children are all so far removed from the normal in their care and treatment, that it is necessary for them to be under constant supervision and have competent medical care. They are not without a ray of hope and modern medicine has made wonderful progress in the treatment of these unfortunate children.

A word about the average weight and height charts of our schools: I wonder at times if they are not more of a hindrance than a help to our parents. I know they certainly cause a great deal of anxiety to parents of this country. There are many other things to consider than height and weight before a child can be classified as below the average.

There is at least 50% more of a gain in growth and development in the first ten years of life than in the second ten years. There is, of course, greater growth before puberty than after puberty. This is noted in the skeletal or body growth, as most of this growth is accomplished before puberty. So the old adage of doing our corrections in our growth and development program in infancy and childhood holds true, because there the greatest help can be accomplished in correcting what might be termed "below the average."

During the era of medicine in which we are now living, there is no question that the greatest strides are being made in the care of our children, both in early infancy and childhood. Not necessarily more, but certainly better, babies, has been a slogan that has been well considered in the last twenty-five years. Of this fact we can readily be proud.

Parents should know that to accurately appraise a child, a series of observations are necessary. The children should be examined at regular stated periods. The children of today are our grown-up population of tomorrow. That growth and development may travel onward and upward, with as few set-backs as possible, the child should have the proper food and protection against certain diseases.

The parents of today's children are constantly being advised along educational lines, the necessity for protection against diphtheria and smallpox and, in older children, against typhoid fever. There is no need for me to further stress the great importance of the necessity of protecting our young ones against diseases that mean so much in the life of our children.

There are many parents who wonder why their children do not eat well and I will attempt to answer just a few questions:

Mrs. P. J. wants to know why her little girl will drink only milk, and will not take her vegetables and other foods.

Now, this question is a common and frequent one. In the first place, this child probably drinks one quart or more of milk every day. She is allowed this ideal food, probably as much as she wants, so consequently her digestive system is busy at work on the milk, and other foods have no attraction for her spoiled appetite. Now, milk is an ideal food and our children need it, but not at the expense of other good food. My advice to this parent is to discontinue the milk entirely until this child has acquired a desire for other foods which she should have to secure proper growth and development.

Mrs. F. H. wants to know if she should wait until her children start to school before having them protected against diphtheria.

By no means. Any time after the sixth month, this should be done. Don't wait until school age. The mortality rate in the first six years of life is greater than after the sixth year. The process is painless and the protection against the disease will give you fewer anxious moments, when your neighbor's child comes down with diphtheria, and your child has been playing with her the day before she was known to have it.

Mrs. S. M. wants to know when is considered the proper time to start orange juice and cod liver oil for her new-born baby.

By the end of the first month they should both be started and, of course, they should be given in small quantities and slowly increased so that

baby's digestive system can become accustomed to these new foods.

Here in Florida we are fortunate in having such a free gift of sunshine and out-door life the year around so that one of our most dreaded nutritional diseases, rickets, is a curiosity rather than one of everyday occurrence as in some of our less fortunate sister states.

Where growth, development and maturity are properly taken care of, and the simple rules of eating, sleeping and play are even partly followed, we will find that old age will come as a pleasure, with a body that will, in the decline of life, slowly cease its normal function at a ripe old age. We can say that a life has been well and judiciously lived and our duty well performed, making room for another generation that will start anew the process of growth, development and senescence, with even greater knowledge than that attained by our present generation.

THE MECHANICS OF POSTURE AND LOCOMOTION*

J. KNOX SIMPSON, M.D.,
Jacksonville.

One of the most striking things about modern inventions to one who is familiar with the intricate structure and mechanisms of the human body, is the similarity of various man-made mechanisms to those which are in operation in one's own body. Most of the mechanical devices which we consider so marvelous are but crude replicas of similar apparatus which we ourselves carry around in sublime unconsciousness of their wonder and perfection. The inventors of the appliances which we consider so remarkable have probably usually felt that they were producing absolutely new things and utilizing new principles, without once stopping to think that the Master Inventor of all time had included in the human body perfected mechanisms of which theirs was but a poor copy. The human eye and the camera, the ear and the radio receiving set, the larynx and the loud speaker, are a few of the fascinating subjects of comparative study which so intrigue us.

In considering the subject of the mechanics of posture and locomotion I feel that it might be of interest to my hearers to have discussed in an analytical way, the locomotion of the human machine as compared with that of the most universally used modern means of man-made locomotion, the automobile; comparing principles and parts involved, to the certain defeat of even the most modernly perfected car.

Building the comparison from the ground up we find first that the widely heralded treads of the automobile tires, which furnish traction hold on the road and prevent skidding, are copies of the patterns of the ridges in the skin of the palms of the hands and soles of the feet which offer such wonderful holding surfaces to the primitive races who walk barefooted and climb smooth barked trees. The point in favor of the human tread is that it is automatically and continuously replaced as wear occurs, and it never gets slick and looses its grip on the road. The air in the tires of the automobile which must be continuously replaced and watched to keep it at the proper pressure to insure satisfactory cushioning is represented in the human machine by the pads of elastic fat forming the cushions of the heel and the ball of the foot. These retain their shape, thickness and elasticity without the help of anyone.

The controversy between the manufacturers of two widely sold and used makes of cars concerning the relative merits of mounting their springs crosswise or in line with the long axis of the car, is solved in the human car by utilizing both principles. There are two perfectly mounted semi-elliptic springs in the human foot, one placed transversely in the front of the foot constituting the transverse arch, and one from heel to ball, constituting the longitudinal arch. There is no squeaking nor rattling of the spring shackles on either one, and they never have to be sprayed.

The latest selling talk of one of the large automobile concerns is that their cars are equipped with knee action in order to take up the shock of irregularities under each wheel without transmission of the shock to the body of the car. They have given credit in this instance anyway, to the originator of the principle, by naming it knee action. One has but to watch the walk of a man with a stiff knee to realize how much shock is saved the human body by the action of the knees. Who has not, when a child, been able to jump from a considerable height without much jarring, by taking up the shock in the bending of the knees against the snubber action of the strong

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tendons in front of the knees and behind the ankles—Gabriel snubbers both, perfected to the nth degree.

The live rubber engine mountings of the car are duplicated to perfection in the human engine by the semilunar cartilages of the knee joint which form two perfectly elastic cushions upon which rest the lower end of the thigh bone in forming the knee joint.

In the overcoming of friction in moving parts the human body exhibits in its joints smoothness beyond comparison. If the surfaces become accidently scored, they are automatically smoothed off. The joint fluid is a lubricant which is manufactured in the joint itself, perfect in body and lubricating qualities, not subject to weather changes, kept automatically at the right amount, and replaced and renewed comstantly as it becomes filled with the breaking down surfaces of the moving parts. We would probably be deprived of many entertaining radio programs if automobiles had half as good oiling and greasing facilities.

In the combustion of fuel and the generation of energy heat is always produced. In the car this is a very variable quantity and is controlled by the principle of irradiation of heat through circulating water through the air surrounded pipes of the radiator. In cold weather the engine is often too cold and in long drives it sometimes gets too hot. This is not true of the human engine. At rest idling or in high gear for long periods of time the temperature remains normal and constant at 98.3 degrees Fahrenheit by virtue of a perfect system of heat control. The circulation of the blood through the small vessels in the skin, the alternate widening or narrowing of these vessels, bringing more or less blood to the surface as occasion demands, with the moistening of the skin surface by sweat, adding as it does the principle of cooling by rapid evaporation of water, is all so perfectly and automatically adjusted that temperature variations in the human machine is an indication of trouble and is not normal.

The utilization of fuel by the engine of the automobile in the production of its locomotion, presupposes a long list of operations in varied localities—the production of the crude oil, its distillation, separation of waste products, refining of the gasoline, transportation to the filling station, thence to the automobile tank, the carburetor and on to the cylinders where combustion, energy production and giving off of waste occurs. This entire process is accomplished within the human engine, automatically and without any conscious effort on its part. The crude oil is poured into the hopper three times a day. There it is mixed and the process of extraction, simplification and refining occurs so that super-test fuel is constantly supplied. This is transferred by pipes to all parts of the body in exactly the proper quantities by a master pump, the heart, a fuel pump whose design and operation is perfection itself. In place of having one engine to drive the human car as does the automobile, with its single power station and transmission of power to the wheels, the human car has billions of engines. Each tiny microscopic cell is a complete engine, taking in fuel, combusting it, generating power, and giving off waste. The power is therefore applied at its source, without transmission, a principle which has been utilized somewhat in the four-wheel-drive car. Each of the human engines is automatic and capable of independent action, but all are grouped as a perfected whole, under the control of the master stations, the brain, the adrenal gland and the thyroid gland.

The human machine is a finished product. No new models are necessary. The old model continues each year to be far in advance of the newest models of the automobile world in all of its essential working parts.

Having now used a sufficient number of comparisons to show the similarity and the superiority of the human machine to the automobile as a means of locomotion, let us carry the comparison a bit further. What about the care which is necessary to the proper functioning of the two machines. Do you give your car better care than you do your own machinery? The human machine in all its grandeur of perfection, can and does wear out. It can and does have trouble occasionally. Are you as fair to it as you might be? Do you go at regular intervals to have its mechanism checked by your physician? Do you show less care and discretion about what you put into your stomach than you do about what you put into the gas tank or crank case of your car? Do you use less thought about what you put on your skin than you do of the cleaner you use on the paint of your car? These are very important questions for you to answer to yourself.

HOW WOUNDS HEAL*

T. H. WALLIS, M.D.,
Ocala.

Today we are to discuss a very important function of the human body—one that is necessary and essential many times during life, and one that takes place daily before our very eyes—namely, how wounds heal.

There is nothing more marvelous in connection with the human body than the repair of wounds. In fact, it is so commonplace for one to cut himself or to undergo some surgical procedure that necessitates a cut or wound that we never question for a moment as to whether it will heal. We merely take it for granted that it will do so. And rightly so; for nature does intend and will make every effort to heal a wound. However, there are many factors that concern or influence the healing of wounds, and it is these influences and these conditions together with the actual process of healing that I am now going to attempt to make clear to you.

Every day either you or some of your friends are inflicted with a wound. No matter how small or how extensive it may be; no matter whether it is accidentally or intentionally produced (as by your surgeon) your body is called upon to repair the damage. At this time if we could but look within the wound and see what actually takes place we would at once be dumbfounded and astonished.

When an injury takes place there is a cutting or tearing of the skin and the tissue beneath. The cells of this particular place are cut in two by the thousands, blood vessels, and small capillaries are severed, as well as nerves and other structures.

What do we first notice? Pain, of course. After the pain we immediately look to see the extent of the injury, and there we find the skin lying open and profuse bleeding from the cut blood vessels. Together with this bloody flow we notice a pearish pink secretion, which is called blood serum.

Little do we realize that at this moment our body is already engaged in the process of repairing the wound. Most of us immediately apply a bandage or hot towels or various other remedies to stop the flow of blood or in other words make it clot. The clot is the very first step in wound repair. But! why does the serum and blood clot? This is nature's way of sealing up the cut ends of the injured blood vessels and furnishing a bridge work between the two cut edges in order that when new cells start to grow they may have a support on which to cross to the opposite side. This clot acts, we might say, as a cement between the wound edges, and while this is taking place, the near-by tissues of the wound are sending out large quantities of white blood cells to the injured area.

If we were to study this process under a powerful microscope we would find all the blood vessels about the wound very much enlarged and within them thousands upon thousands of white blood corpuscles, which are being sent as rapidly as possible to the wounded area. We ask: Why the white blood corpuscles? What good do they do?

Well, I often like to refer to a white blood corpuscle as a policeman of the body. No matter where a wound occurs we find in the blood vessels large numbers of white blood cells being rushed to the site of the injury, while in a normal person these cells are scattered over the whole body.

After an injury occurs, we find these cells, or policemen, if you please, coming out of their hiding places and rushing to the site of injury. They are ready at all times, and the moment trouble or necessity arises off they go to the scene of action to perform their duty. After arriving at the wound they have a definite function. They crowd themselves around and in the wound and stand ready to destroy any germ that may have entered the wound.

Now we have the wound cemented together with blood and serum and white blood corpuscles surrounding it to prevent any trouble. We are ready for actual wound healing.

Wound healing may take place in two ways:

1. By first intention (or as nature intended) which is the most desirable way.
2. By second intention or by granulation or in other words by the most undesirable way, although this may be the only possible way to heal in wounds when the tissues are extensively torn or bruised.

Let us consider healing by first intention or by the best possible way. Healing will take place rapidly in this manner, provided the skin edges are brought together firmly after first cleaning out the wound with antiseptics. In fact the skin

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may be held firmly together in 24 hours if this is done. The blood clot in the wound serves as a support to the connective tissue cells on the edges of the wound and these tissue cells immediately begin to multiply and form new tissues. These fibroblasts, as they are known, eat up large numbers of white blood cells that originally came to eat up bacteria and multiply so that new cells from one side of the wound interlace with new cells from the other side, forming a sort of spider web of new cells.

The near-by capillaries or small blood vessels begin to bulge and soon at the bulging point a new capillary develops. It, too, joins the new connective tissues to interlace with those of the other side. The clot is now said to be organized, meaning that it has new connective tissue cells and new blood vessels.

These fibroblasts begin to become elongated and string-like and develop into fibers. These fibers now begin to contract. As contraction takes place the fibers, being anchored to both sides of the wound, pull the wound edges together. As the edges become very close together the outer edges of skin or epithelial of the wound sends out new cells from each side to cover over the new surface and we have what is commonly called a scar, and complete healing of the wound in the best possible way or as nature so intended it. Wound healing by first intention exhibits no evidence of inflammation.

Let us consider healing by second intention or by granulation. Usually wounds of this type are either the ones with large cavities or loss of tissue or are wounds that have become infected and in which the edges have gaped far apart. It is called healing by granulation because granulation is visible. The actual healing process is identically the same as by first intention provided pus is absent. As a matter of fact, infection or pus is usually present. As a result of infection there is a destruction of adjacent tissue and repair cannot take place until this dead material is cast off. This process calls for a larger quantity of policemen or white blood cells and enormous number of fibroblasts and expenditure of considerable time. It requires longer for an infected wound to heal than for an incised wound to be repaired. An infected wound can heal by granulation only.

A short time after the infliction of a wound the oozing ceases and clot forms. Soon it is packed with white blood cells. In an hour or two the wound becomes glistening because of coagulation of fibrin of the blood. In a few days there is a marked discharge of pus. All this time the new cells and blood vessels are forming and trying to bridge over the cavity, but because of the infection present and because these cells are young and delicate, you can readily see that large numbers of these baby cells perish. As these cells are destroyed inflammation increases. In order to make up for the cells originally destroyed by the wound and those being destroyed by infection, it is necessary to have rapid multiplication and rapid growth. Gradually the new cells get the upper hand and bridge over the cavity, but in doing so it takes much time and a larger number of cells. This type of healing takes place from the bottom of the wound upward to the surface, and results in a very fibrous or thick scar.

As a result of this large area of granulation it is necessary for the skin or epithelial cells to multiply many times more than would be necessary had the healing been by first intention, because of the larger scar or greater distance between the skin edges. This process of healing by second intention consumes much more time and produces far greater scar formation than that of healing by first intention. The more scar formation there is the more contraction and as a result the more disfiguration.

You can now readily see that the main differences in wound healing is that by first intention it is as nature intended and results in little scar formation; by second intention or granulation, as nature did not intend it, resulting in disfiguring scar formation. It may be of interest to you now that you understand how a wound actually heals, to know of the various types of wounds.

Wounds are classified in the following groups:

First. Incised or clean-cut wounds, or one which is produced by an edged instrument such as a knife or a piece of glass. Such wounds do little tissue damage and have the best possible chance of healing by first intention.

Second. Lacerated or torn wounds resulting from a blow or a squeeze which bruises and crushes the tissue and ruptures the skin.

These are seen following our many automobile accidents.

Third. Punctured or penetrating wounds are made by pointed objects, such as knives, splinters and nails. The depth exceeds the surface areas. These wounds almost completely close when the

instrument inflicting it is withdrawn, hiding the damage it may have done.

Punctured and perforating wounds generally look the least harmful but they are by far the most dangerous. The nail wound is by far the most common in children. Most of us ignore it because it's small, and rarely is there pus. But it is within these punctured wounds that the deadly tetanus or lock-jaw germ thrives and lives only to strike after healing has taken place. In all punctured wounds lock-jaw or tetanus serum should always be given.

Penetrating wounds are almost equally as dangerous because it is impossible to visualize what injury has taken place in its depths. This type of injury often results in death when inflicted to the skull, chest or abdomen.

When such wounds are sustained the duty of the patient is to keep all foreign bodies such as cobwebs and tobacco out of the wound. Place a sterile dressing or a clean cloth over the wound and come to the doctor at once. It is the duty of the doctor to cleanse and disinfect the wound and so minimize or prevent infection; to restore the tissues to as near normal by suturing, so as to hasten healing and reduce to the minimum the amount of scar or deformity; then to administer antitoxins when indicated to prevent such serious infections as tetanus or gas gangrene.

If both the patient and the doctor perform their respective duties, not only will wounds heal quickly and without disfiguration as nature intended but many lives will be saved.

STATE NEWS ITEMS

Dr. Gerry R. Holden of Jacksonville was guest of honor at a dinner held at the Biltmore Hotel, Atlanta, September 15, by the officers and members of the Executive Committee of the Southeastern Surgical Congress, of which he is president. Plans were laid for the annual assembly of the Congress in Jacksonville next March.

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Dr. D. M. Adams of Panama City and Miss Mary Thompson of Ft. Lauderdale were married September 24th at Miami. Dr. Adams is a Tulane graduate and served his internship at the Jackson Memorial Hospital.

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Dr. Frederick J. Waas of Jacksonville visited the Mayo Clinic during the middle of October. While on this trip he also attended the meeting of the American College of Surgeons.

At the call of President Homer Pearson, a meeting of the Executive Committee was held in Ocala, Sunday, October 14. A number of important questions were brought up for action.

Dr. Eugene G. Peek, General Chairman of Arrangements for the Marion County Medical Society, and Dr. Henry C. Dozier made progress reports. On the recommendation of the Marion County Medical Society, the Executive Committee designated May 13, 14, and 15, 1935, as the official dates for the next annual meeting of the Association.

Dr. Ralph Greene, chairman of the Committee on State Hospitals for Insane, appeared before the Executive Committee and made a progress report of his Committee.

Drs. W. C. Page, E. W. Warren and John McEwan made recommendations with reference to the meeting of the Railway Surgeons' Association which is held just preceding the Association's annual meeting. In order to provide time for special groups to meet previous to the official scheduled meeting of the State Association, the Executive Committee took action to have the First General Session of the Association convene at 4:00 p. m., Monday, May 13. This will provide sufficient time for special group meetings in advance of the regular program of the State Association. It was also decided to eliminate the usual smoker on Monday night and hold the first meeting of the House of Delegates at 8:30 p. m., Monday, May 13.

* * *

Dr. Stewart Thompson attended the Conference of Secretaries and Editors of State Medical Associations at the American Medical Association headquarters in Chicago during the month of September. This trip was made at no expense to the Florida Medical Association.

* * *

The following doctors attended the American Roentgen-Ray Society meeting held in Pittsburgh, September 25-28: J. C. Dickinson, Tampa; F. K. Herpel, W. Palm Beach; J. H. Lucinian, Miami; O. O. Feaster, St. Petersburg and W. M. Shaw, Jacksonville.

* * *

Dr. J. H. Chiles, formerly of Apopka, announces the opening of offices in the old Evans Studio Building at the corner of Main and Washington Streets, Orlando.

The Radiological Society of North America will hold its next annual meeting at the Hotel Peabody, Memphis, Tennessee, December 3-7, 1934. The medical profession is cordially invited to attend. Further information may be obtained by addressing the Secretary-Treasurer, Dr. Donald S. Childs, 607 Medical Arts Building, Syracuse, New York.

* * *

Drs. W. C. Bayless and Banks H. Goodale of Jacksonville enjoyed a motor trip to New York for two weeks in September. They visited in Washington, Philadelphia and Baltimore, returning by way of Luray, Virginia, through the beautiful Shenandoah Valley.

* * *

Dr. Julius C. Davis of Quincy recently spent a two weeks' vacation in the mountains of North Carolina.

* * *

Dr. and Mrs. E. J. Melville of St. Petersburg returned September 22 from a four months' trip around the world. They sailed from San Francisco for Japan, China, the Philippines, Australia and India.

* * *

Dr. and Mrs. D. Ward White of Miami Beach have returned from a two months' trip north, visiting at Binghamton, Niagara Falls, Lake George and Canada. While in New England, Dr. White visited several hospitals and clinics.

* * *

Dr. M. A. Lischkoff of Pensacola spent his vacation in Chicago and Rochester. While in Chicago, he attended the meeting of the American Academy of Ophthalmology and Otolaryngology.

* * *

Dr. J. R. McEachern, City Health Officer of Tampa, Dr. Noble A. Upchurch, City Health Officer, Jacksonville, Dr. Henry Hanson, State Health Officer, and Dr. Stewart Thompson, Director of the Bureau of Vital Statistics, attended the meeting of the American Public Health Association in Pasadena, California, during the month of September. Drs. Hanson and Thompson read papers before their Sections.

* * *

Dr. William E. Ross of Jacksonville spent three weeks last month on a vacation, visiting brothers in New York City and Boston.

Dr. Mederith Mallory of Orlando has returned from a three weeks' residence at Coronado Beach where he indulged in crabbing.

* * *

Dr. C. D. Hoffmann of Orlando spent three weeks in August visiting the clinics of Johns Hopkins University in Baltimore and the Woman's Hospital in New York City.

* * *

Dr. Max Ghertler of Miami has returned from a sojourn at Saratoga Springs, N. Y. He attended the laying of the corner stone of the Simon Baruch Research Laboratory by Governor Lehman.

* * *

Dr. and Mrs. W. A. Harrison of Ft. Myers have returned from an extended northern trip. They visited friends in various cities in Tennessee, New York, New Jersey, and Canada. They visited the World's Fair in Chicago and the Rotary Convention at Detroit. Dr. Harrison attended eye, ear, nose and throat clinics in several large cities.

* * *

Dr. J. S. McEwan of Orlando spent three weeks in September at the Mayo Clinic in Rochester. Shortly after his return, he made another trip north, which included a visit to Washington, New York and Baltimore. He attended the national meeting of the Aeronautical Examiners' Association.

COMPONENT COUNTY SOCIETIES

DADE COUNTY MEDICAL SOCIETY

A joint meeting of the Dade County Medical Society and the Dade County Dental Society was held October 5, at 8:30 p. m., in the Club Rooms of the Huntington Building, Miami. Papers on "Relation of Medicine to Dentistry" were presented by Frank Morrow, M.D., and J. Harold Klock, D.D.S. They were discussed by R. M. Harris, M.D., and E. V. Denault, D.D.S.

DE SOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY

The DeSoto-Hardee-Highlands County Medical Society held its regular monthly meeting at the Jacarando Hotel, Avon Park, Tuesday evening, August 14. Dr. C. H. Murphy of Bartow was guest speaker at this meeting. He presented a paper on "Syphilis" which was followed by interesting and instructive discussions.

DUVAL COUNTY MEDICAL SOCIETY

The first fall meeting of the Duval County Medical Society was held at 8:15 p. m., October 2, at the Mayflower Hotel, Jacksonville. In compliance with a resolution passed by the Society last February, the program was devoted to medical economics. Officers of the Retail Druggists' Association were guests at this meeting and were called upon for short talks on subjects that affect both the doctor and the druggist. Dr. Robert Baker gave an entertaining paper on "How to Practice Medicine and Still be Happy", which was discussed by Dr. Herrman H. Harris.

PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY

Dr. George R. Creekmore of Brooksville entertained the Pasco-Hernando-Citrus County Medical Society Thursday evening, September 13. A full course dinner was served at the Tangerine Hotel, followed by a scientific meeting at the Hotel. A symposium on "Carcinoma of Cervix and Body of Uterus" was given by the following guest speakers of Tampa: Drs. W. P. Adamson, J. G. Dickinson, R. G. Nelson and William Rowlett. Dr. Adamson presented: "Responsibility of the Family Physician"; Dr. Nelson, "Responsibility of the General Practitioner"; Dr. Rowlett, "Injuries and Infections of Cervix and Uterus", and Dr. Dickinson, "Frequency and Mortality of Carcinoma of Cervix and Uterus", with lantern slides. An instructive general discussion followed the presentation of these papers.

POLK COUNTY MEDICAL SOCIETY

Members of the Polk County Medical Society and their wives were delightfully entertained Thursday evening, August 23, by Dr. and Mrs. Cordes of Frostproof.

The occasion was the annual picnic by the County Medical Society and the County Medical Auxiliary, a custom established a few years ago for the August bi-monthly meeting of the two societies.

This picnic was held at the American Legion hut on Lake Reedy, an ideal spot beautifully located. As the doctors entered Frostproof, Boy Scouts stationed all along the way directed them around Lake Reedy to the picnic grounds.

Target practice was enjoyed by some, swimming and boating by others and all enjoyed a fish fry served about six thirty. Everyone enjoyed the hospitality of Dr. and Mrs. Cordes.

WOMAN'S AUXILIARY

TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

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MRS. S. M. COPELAND
1356 Willowbranch Ave.,
Jacksonville, Florida

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AN INVITATION

The Woman's Auxiliary to the Southern Medical Association will meet in San Antonio, Texas, November 13th to 16th.

Headquarters for the women will be in the St. Anthony Hotel where all meetings and functions will be held.

It is earnestly desired that our women of the South make every effort to attend this meeting "en masse." Your presence will not only help the meeting but will be a great inspiration to you yourselves. San Antonio is delightful and everything possible is being done to make your visit enjoyable.

A cordial and pressing invitation is extended to everyone to attend the Auxiliary Luncheon on Wednesday, Nov. 14th, to meet Mrs. Robert Tomlinson, National Auxiliary President and other distinguished guests.

* * *

The following items taken from the monthly news letter just received from Mrs. Robert E. Fitzgerald, national chairman of press and publicity, show something of what is being done in other states:

KANSAS

"We consider our biggest piece of educational work, the work of the Legislative Department. Our State Chairman investigated the Pure Food and Drug Act and has written a fine article on this subject, which was given at the mid-winter State Board meeting, and at many Civic Club meetings. The men's advisory board of the state asked us to investigate legislation and to make a map of our state, which would show the locations of the doctors and auxiliary members in respect to their representatives and senators. The auxil-

iary's duty was to bring out the feeling of the state representatives and senators in respect to the medical profession, on such questions as the Basic Science Law, their religion, their family physicians and their specialists. Much can be gained if we are informed as to these qualifications of the state representatives and senators. We know at once whether they are in sympathy with Christian Scientists and Osteopaths, or with the medical profession."

MISSISSIPPI

"Assistance was given to the State Board of Health by placing in the Women's Work of the CWA the project of teaching Hygiene and First Aid in the schools. This project resulted in the employment of eighty-five nurses for instruction purposes only, and several thousand children receiving instruction in health and first aid."

OREGON

"Since the organization of the Woman's Auxiliary to the Oregon State Medical Society a Basic Science Law was successfully passed in the 1933 Legislature. This act has long been fought for by the State Medical Society and defeated several times, but undoubtedly the assistance of the auxiliary finally brought success. While celebrating this great event for scientific medicine in Oregon, we were suddenly faced with the fact that a group of cultists with the lowest standard of education known had attacked our Basic Science Law with a petition to have it repealed at the general election in November. This would not be so bad if it were a simple repeal of the Basic Science Law but their petition embodies in itself an amendment to the Constitution of Oregon whereby all Medical Legislation and Health Laws heretofore existing are repealed and the practice of the healing art is thrown wide open to one and all. Therefore you will see that our Woman's Auxiliary * * * has before it this summer and fall the greatest fight and noblest work we have yet undertaken."

VIRGINIA

"Regular meetings with splendid educational programs have been held in all auxiliaries. Special attention has been given to the health programs which have been planned for lay organizations. The Norfolk County Auxiliary has endorsed the health education program of the State Superintendent of Schools. This auxiliary has particularly emphasized yearly physical examinations and proper diet, by showing moving pictures combined with lectures on these subjects before ten schools and civic organizations."

DR. RANDOLPH'S SANITARIUM
JACKSONVILLE, FLORIDA
Registered and Approved by A. M. A. Council on Medical Education and Hospitals
NERVOUS AND MILD MENTAL CASES

Airy corner rooms. Home atmosphere emphasized. Utmost privacy. Number of patients limited to insure maximum individual attention.

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Delightful suburban location—Fifteen minutes to city amusements — Forty minutes to the beaches.

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PREOPERATIVE SKIN DISINFECTION

This preparation contains 2% Mercurochrome in aqueous-alcohol-acetone solution and has the advantages that:

Application is not painful.
It dries quickly.
The color is due to Mercurochrome and shows how thoroughly this antiseptic agent has been applied.
Stock solutions do not deteriorate.

Now available in 4, 8 and 16-oz. bottles and in special bulk package for hospitals.

Literature on request.

HYNSON, WESTCOTT & DUNNING, INC.
Baltimore, Maryland

Wisconsin

"Our Public Relations work has followed the recommendations of the National Public Relations Committee as closely as possible. Over one hundred and twenty medical speakers were placed by auxiliary members before lay organizations since May, 1933. Six county auxiliaries have the use of radio stations for health programs. A fifteen minute radio talk on some health subject is given each week by the Executive Secretary of the State Auxiliary. A recently organized auxiliary held an open meeting at which Dr. Cramp of the American Medical Association was the speaker. Hand bills concerning this lecture were printed and distributed by the school children with the result that over seven hundred attended this coming year."

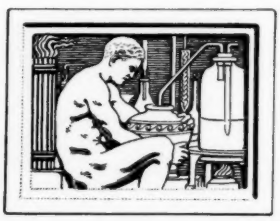
ADVERTISERS' NOTES

Karo Syrup

In this issue of the Journal appears a new advertisement—that of the Corn Products Refining Company, manufacturers of Karo Syrup.

Attention is called to the fact that Karo Syrup is sold in grocery stores even in country districts. Therefore, it can be obtained more readily than other dextro-maltose products which are sold through drug stores alone. The ease with which Karo Syrup or the powdered form can be obtained, as well as its low price, will appeal to physicians everywhere.

New Lilly Research Laboratories Open



Because of the great progress in various subdivisions of several branches of medical science, research has been a field of growing importance in the last quarter century. The scope of research has been particularly broad in the pharmaceutical and biological industry for the reason that it quite naturally divides into three avenues; pure research, production research, and clinical research. Pure research and production research may be said to differ only in their objectives. Pure research becomes a subject for production research as soon as there is a clinical objective. The objective attained, there arises a need for a clinical background.

Among the leading manufacturers of thera-

Southern Medical Association — IN the South, OF the South, FOR the South

November 13-16, 1934

THE OUTSTANDING MEDICAL meeting of the year in the South, yes, in this Country—the annual meeting of the **Southern Medical Association** in San Antonio in mid November. In the eight general clinical sessions, the sixteen sections, the eight independent medical societies meeting conjointly, and the scientific and technical exhibits every phase of medicine and surgery will be covered—the last word in modern, practical, scientific medicine and surgery. Addresses and papers by distinguished clinicians not only from the South, but from all over the United States, as well as from Mexico, France and England.

Regardless of what any physician may be interested in, regardless of how general or how limited be his interest, there will be at San Antonio a program to challenge that interest and make it worth while for him to attend.

EVERY PHYSICIAN IN THE SOUTH who is a member of his state and county medical societies **can be and should be** a member of the Southern Medical Association. The annual dues of $4.00 include the Association's own Journal each month, the **Southern Medical Journal — the equal of any, better than many.** Southern Medical Association, Empire Building, Birmingham, Alabama.

The SMA ROUND-UP, San Antonio, November 13-16

One of a series of advertisements prepared and published by PARKE, DAVIS & CO. in behalf of the medical profession. This "See Your Doctor" campaign is running in the *Saturday Evening Post* and other leading magazines.

YOU DON'T BELIEVE IN DOCTORS?

"I'M TOO BUSY to go to the doctor. And I haven't much faith in doctors anyway."

Every once in a while you hear a person make such a statement—perhaps you have yourself. Does it make sense? Let's see—let's look at life as it used to be and life as it is today . . .

A little over a century ago, smallpox was the rule rather than the rarity—in fact, a case is recorded in which a criminal was identified by the fact that his skin was unblemished by pockmarks!

Today, thanks to vaccination, smallpox has almost completely disappeared. A doctor discovered vaccination—every doctor now offers its protection.

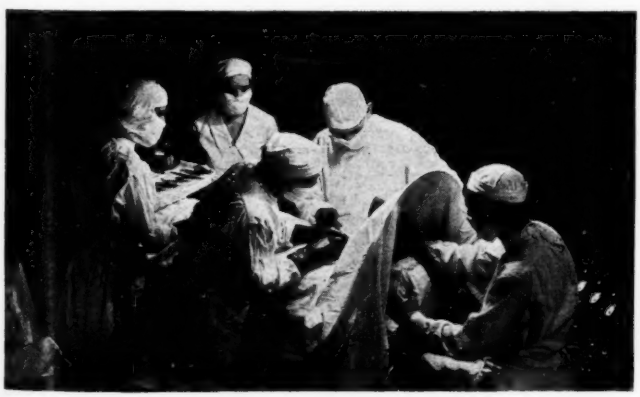
UP until the middle of the 19th Century, a surgical operation was a horrible ordeal. The comforting oblivion of anesthesia was not known, and the lack of proper antiseptics made even the simplest operation an unequal gamble with death.

Today, surgery is so efficient, so advanced, so much a part of nearly everyone's experience, that we take even downright miracles as a matter of course.

TWELVE years ago, diabetes was a virtual sentence to death. *Today, doctors can give most diabetics a normal span of life.* Just a few years ago, pernicious anemia was hopeless. *Today, it can be fully controlled.*

Kidney disorders, childbirth, asthma, goiter—the terror of all of them has been lessened by miracles that modern medical science has wrought.

The discovery and application of vitamins have almost eliminated rickets and scurvy . . . and deserve much of the credit for the sturdy legs and healthy bodies of our children. Yet at the beginning of this Century, the word "vitamin" wasn't even in the dictionary.



Many diseases that were shrouded in mystery even as late as 30 years ago, are an open book to the doctor of today. Syphilis, whooping cough, scarlet fever—the causes of all have been discovered since 1900. And that means in most instances, also a method of control.

MEDICINE is a living thing, constantly growing, constantly developing, constantly moving forward. And the one person who can place this knowledge at your disposal is *your doctor.*

The men and women that comprise the medical profession spend years of preparation in learning to become doctors . . . and they keep in touch with medical progress through clinics, hospitals, medical societies, medical journals, medical conventions, and other agencies which help disseminate this precious knowledge.

It is a sensible thing to call upon your doctor frequently enough to *preserve* health as well as to *restore* health. Faith in your doctor, and intelligent recourse to the knowledge he offers, might mean the difference between a bed of pain and continued good health—between a premature death, and a pleasant and useful "threescore and ten."

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN

The World's Largest Makers of Pharmaceutical and Biological Products

peutic agents who have devoted much attention to research in various divisions of medical science, are Eli Lilly and Company, who, on October 11th, formally opened their new Research Laboratories at Indianapolis. These new laboratories are said to represent three years of study and careful planning in order that the facilities might be adequate to the demands made upon them in an era that is marked by constant change and improvement. The main building is 220 feet long and 53 feet deep. Three stories and a basement provide space for the offices of the research group and for laboratories containing equipment of the latest design for research in the field of chemistry, physiology, pharmacology, and biology, related to medical science. A four-story and basement wing extending back of the main building is 84 feet long and 53 feet wide. This unit or wing is occupied by animal quarters which are supplied with fresh air, cooled and filtered. Temperature control for animals is recognized as essential to accuracy in physiological testing.

Scientific leaders from all parts of the country attended the formal opening of this latest addition to the Lilly laboratories.

The principal speakers at the dedication ceremonies were Sir Henry Dale, C.B.E., M.D., F.R.S., Chairman of the National Institute for Medical Research, London, England, and Secretary of the Royal Society of London; Sir Frederick Banting, of the University of Toronto; and Dr. Irving Langmuir, Director of Research for the General Electric Company. Other notables who took part in the dedication exercises were Dr. Elliott P. Joslin, Dr. Frank R. Lilly, Dr. Charles R. Stockard, Dr. George H. Whipple, and Dr. Carl Voegtlin. Following the afternoon program the new laboratories were open for inspection.

Treatment of Varicose Veins

Dr. T. Henry Treves-Barber in his book, "The Treatment of Varicose Veins of the Lower Extremities by Injections," states that remarkable achievements have been made within the last few years for the cure of varicose veins and their complications. No other branch of surgery can claim to have acquired, in such a short space of time, more satisfactory or more brilliant results than the sclerosing method for the obliteration of varicosed veins. It is indeed surprising that a complex, disabling, dangerous and, hitherto, an almost incurable surgical disease has now become, on the whole, one of the easiest to cure. All the

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For the treatment of
NERVOUS AND MENTAL DISEASES

Grounds 600 Acres
Buildings Brick Fireproof.
Comfortable Convenient
Site High and Healthful

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Terms Reasonable

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POSTGRADUATE instruction offered in all branches of medicine. Courses leading to a higher degree have also been instituted.

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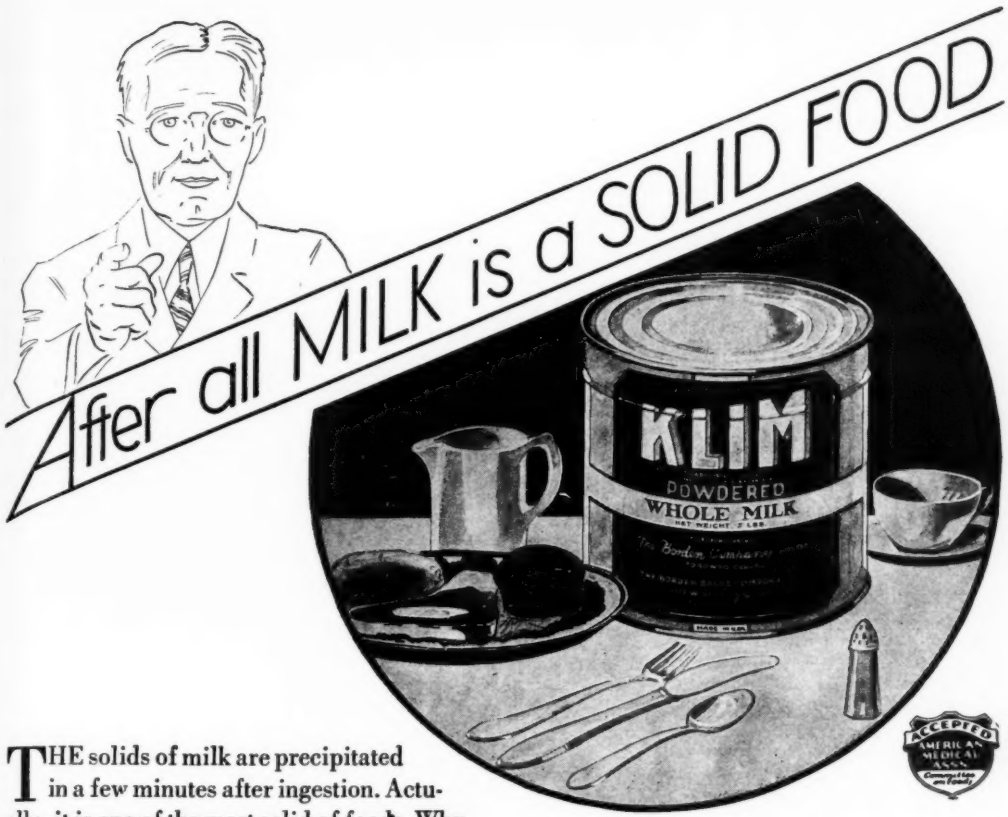
Drug and Alcoholic patients are humanely and successfully treated in Glenwood Park Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

PATRONIZE JOURNAL ADVERTISERS

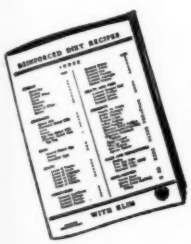
Advertisers in our Journal bear the stamp of approval of the American Medical Association and also of the Florida Medical Association. They are worthy of the patronage of our members.



THE solids of milk are precipitated in a few minutes after ingestion. Actually, it is one of the most solid of foods. Why, therefore, satiate an unwilling appetite with the seven-eighths of milk that is water?

KLIM, powdered whole milk, contains in one ounce the caloric value of a full 8 ounce glass of milk. And, besides its minimum bulk, KLIM's soft, friable curd makes it doubly valuable in any difficult feeding case.

Below is a recipe from the KLIM cookbook (Reinforced Diet Recipes), using the concentrated butterfat, mineral, lactose, protein and vitamin content of KLIM. Write for as many of these practical helpful booklets as you may need for patient distribution. You will also receive samples of KLIM.



A Typical Recipe from "*Reinforced Diet Recipes*"

MASHED POTATOES

Potatoes to make 2 cups when mashed
2 tablespoons butter
½ cup hot water
1 teaspoon salt
¼ teaspoon pepper
5 teaspoons KLIM

To mash potatoes add the butter and the hot water. Beat until butter is melted. Add salt and pepper. Then add the KLIM a tablespoon at a time. Beat until fluffy.
Volume: 2¼ cups.

This recipe furnishes ⅞ cup of milk (154 calories) over normal recipes.

Give KLIM to those youngsters troubled with anorexia or to those unable to ingest the needed volume of milk. You'll build vital, healthy boys and girls.

KLIM

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old-time palliative measures such as bandages, elastic stockings, numerous dressings for ulcers, ointments, etc., may now be, in the vast majority of cases, considered as things of the past and of historical interest only.

The National Drug Co., Philadelphia, will be very glad to forward literature on Moru-quin (Solution of Sodium Morrhuate, Alkaloidal Quinine and Benzyl Alcohol) on request.

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Clinical tests prove conclusively that pregnancy is a drain upon the woman's calcium reserve. Very often this is manifested by softening of the bony structure . . . including the teeth. It is a well-known fact that pregnant women very often have decaying teeth, and even lose their teeth during pregnancy.

Such women need their calcium intake increased—and their ability to mobilize calcium augmented. For the drain upon calcium is so great at times as to actually abstract calcium from their bones and teeth.

Cocomalt because of its admixture of milk supplies an abundant amount of calcium and at the same time a sufficient amount of Vitamin D to help mobilize the calcium. Cocomalt is licensed by the Wisconsin University Alumni Research Foundation under Steenbock Patent No. 1,680,-818. One glass or cup of Cocomalt, prepared as directed, contains not less than 30 Steenbock (81 U.S.P. revised) units of Vitamin D. It is accepted by the Committee on Foods of the American Medical Association.

Medical Men For Things Medical

"The principle that medical men should be the ones to exercise control over medical service is almost axiomatic. Yet there is confusion of thought where there could be straight thinking if all the facts were brought out and faced.

"There are those who would virtually make the physician an employee of the state. They fail to recognize the utter incompatibility between the American political system and the methods of truly professional men.

"There are those who complain about the scarcity of physicians. Yet it is a fact that while England has one doctor for 1,490 persons, France one for 1,690, and Sweden one for 2,890, there is in the United States one physician for every 780 persons.

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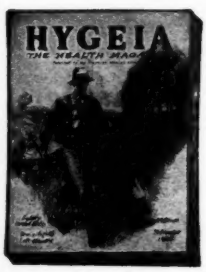

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The Health Magazine for Your Waiting Room Table
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HYGEIA promotes confidence and understanding between physician and public. It is your own representative, giving in attractive printed form every month the health teaching you want your patients to have.

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SPECIAL OFFER
Six Months for $1.00!
Pin a dollar bill to this ad and mail to
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